

Fig.1

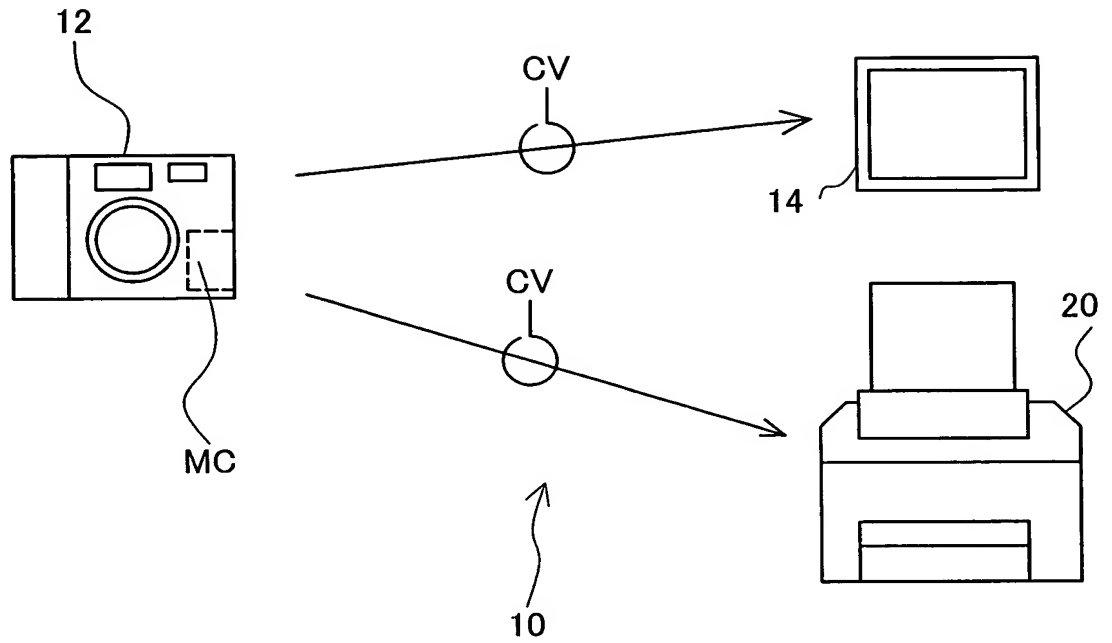


Fig.2

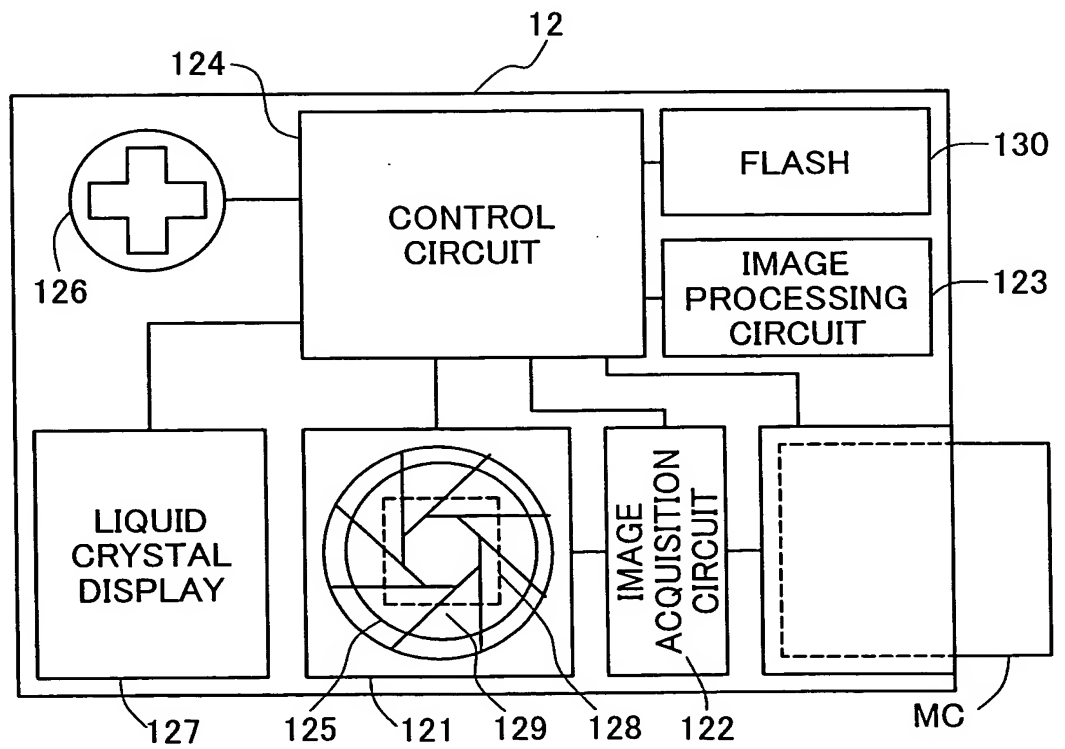


Fig.3

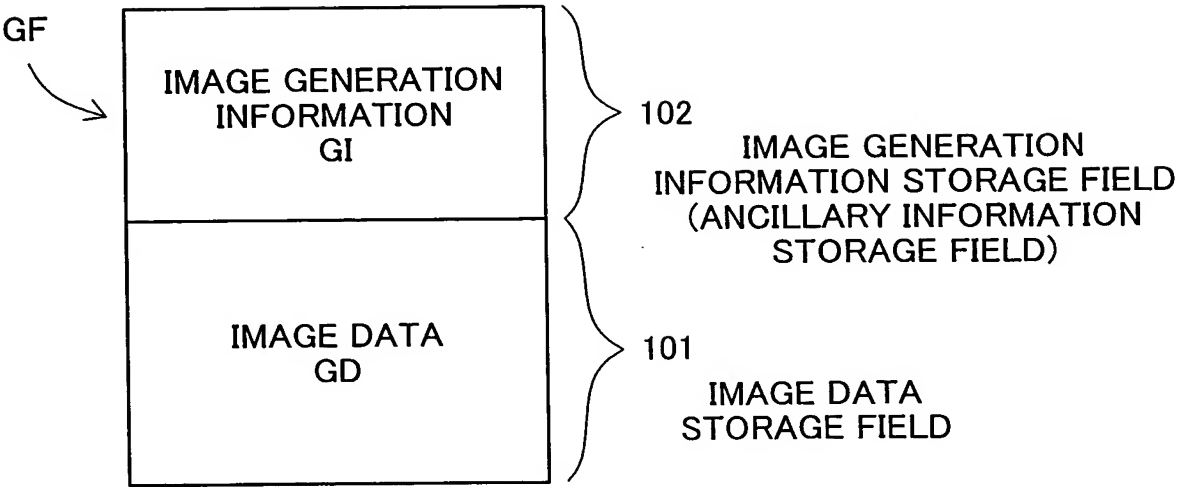


Fig.4

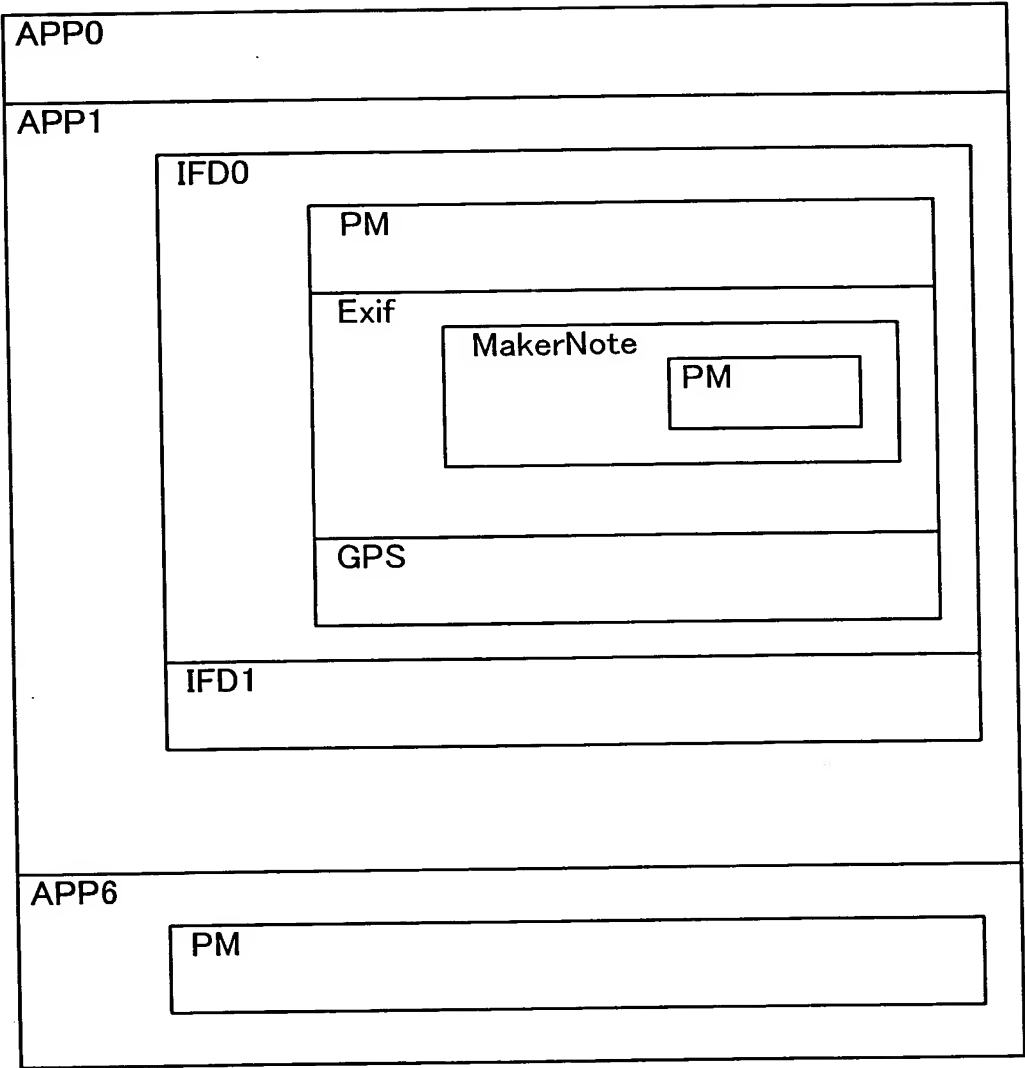


Fig.5

| Tag name | Parameter value |
|------------------|--|
| Light source | clear sky |
| Flash | <ul style="list-style-type: none">• auto flash mode• flash on• reflected light sensor present• reflected light sensed |
| Subject distance | 1 (m) |
| Subject area | <ul style="list-style-type: none">• center coordinates (640, 512)• width (324)• height (375) |
| Flash intensity | 1000 (BCPS) |
| Aperture value | F8 |
| ISO speed rate | 100 |



Fig.6

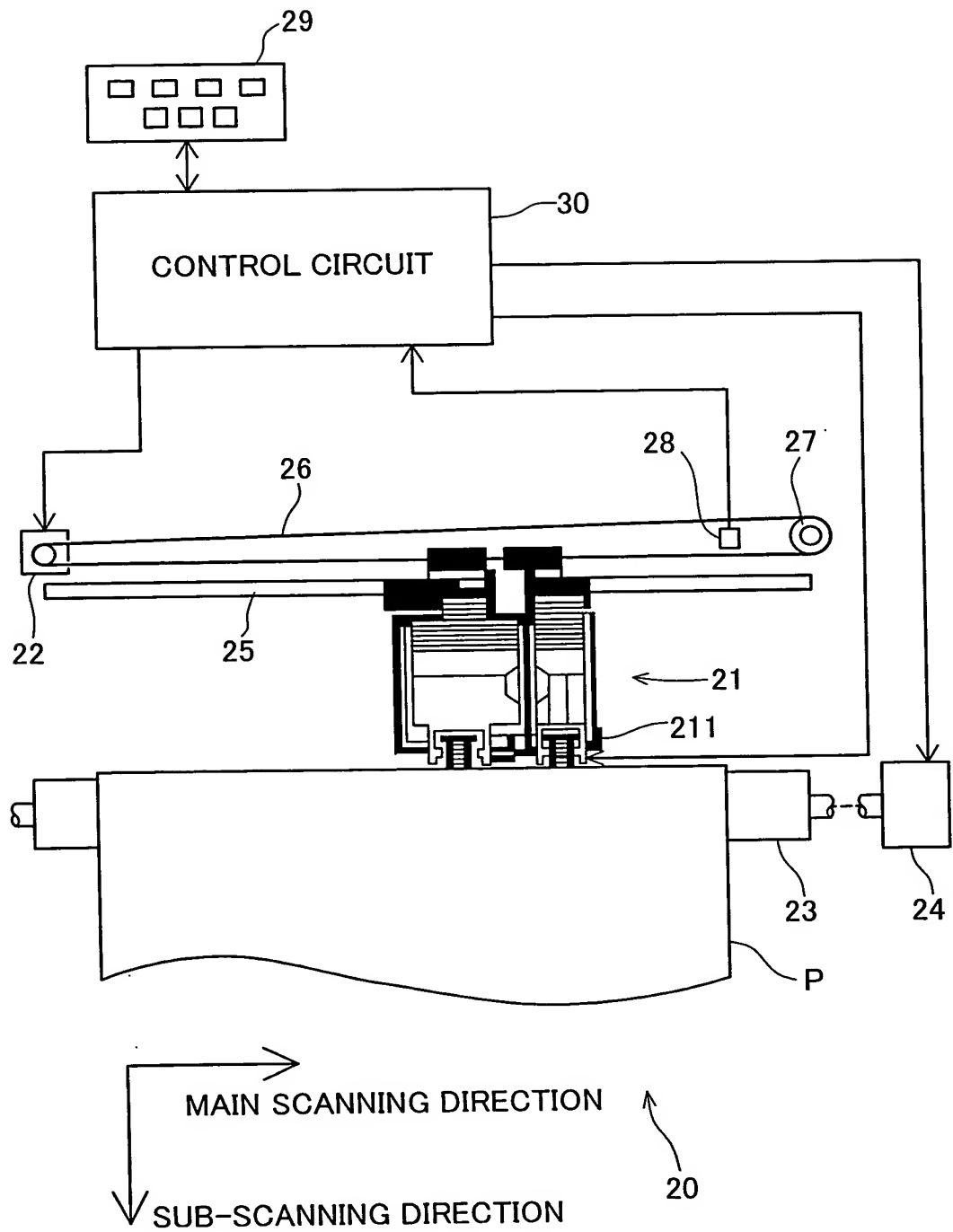


Fig.7

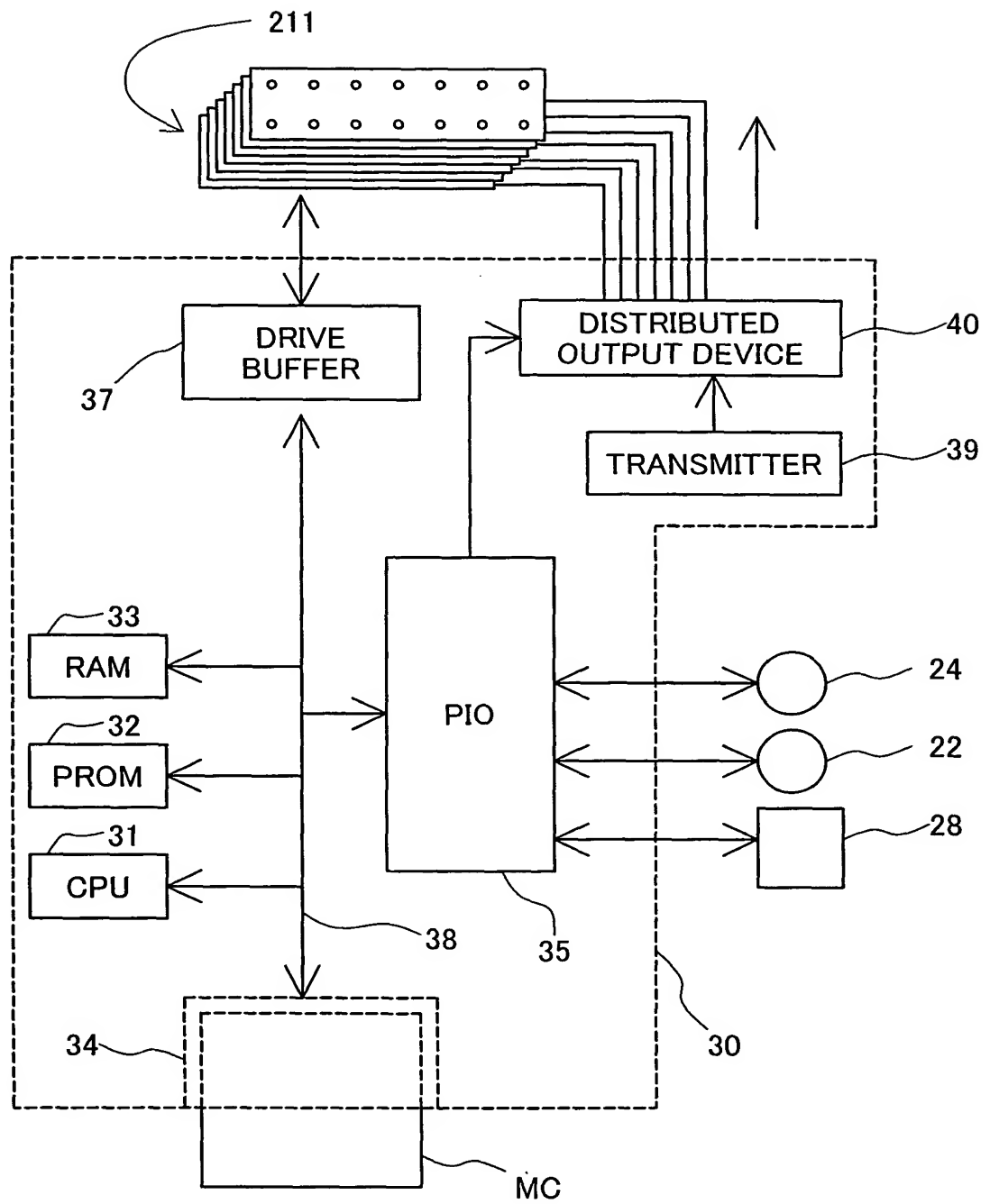


Fig.8

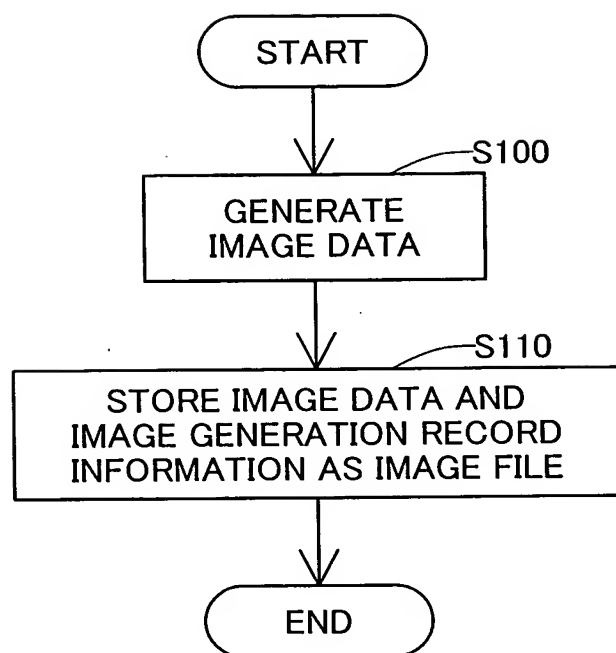


Fig.9

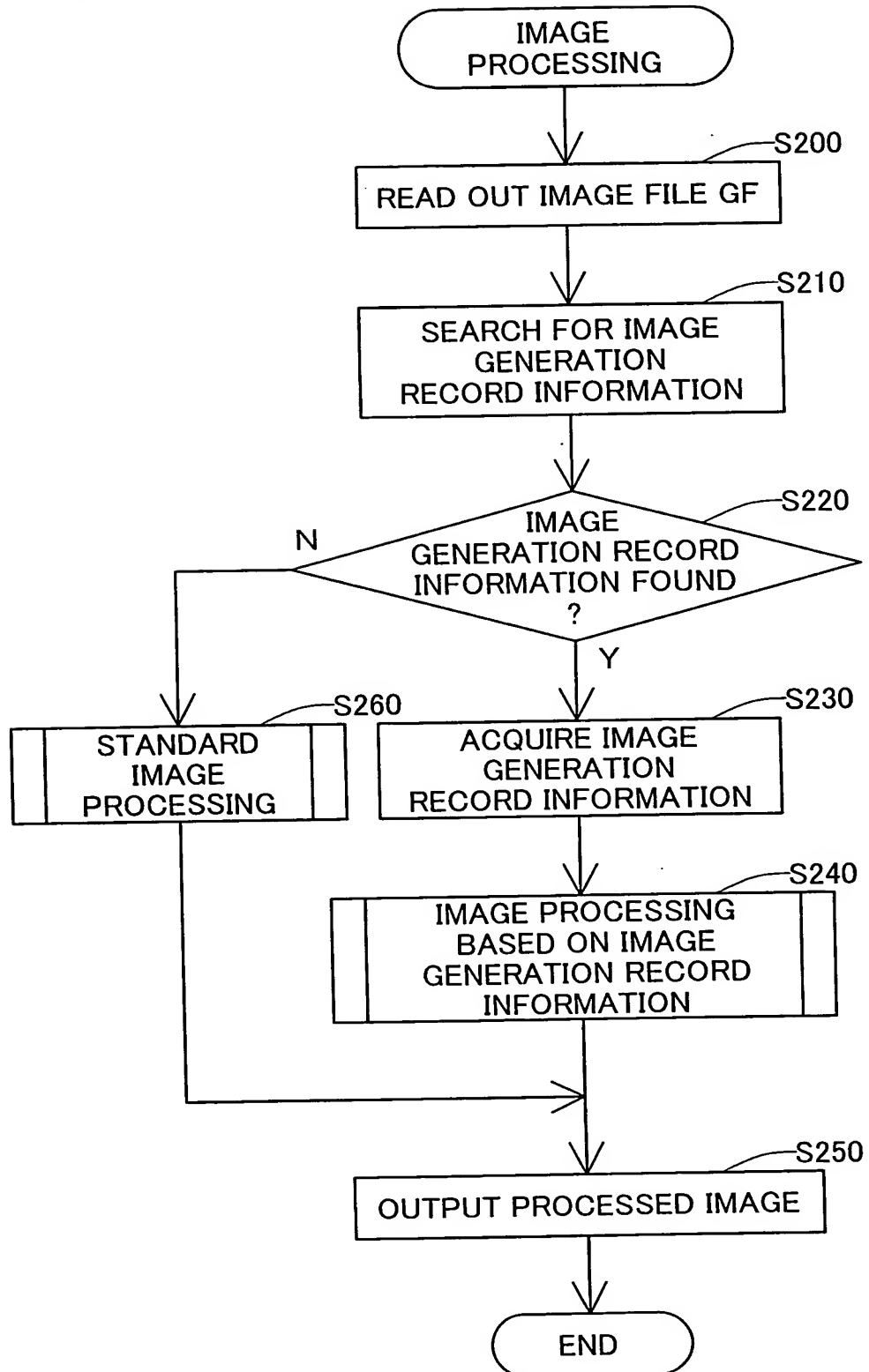


Fig.10

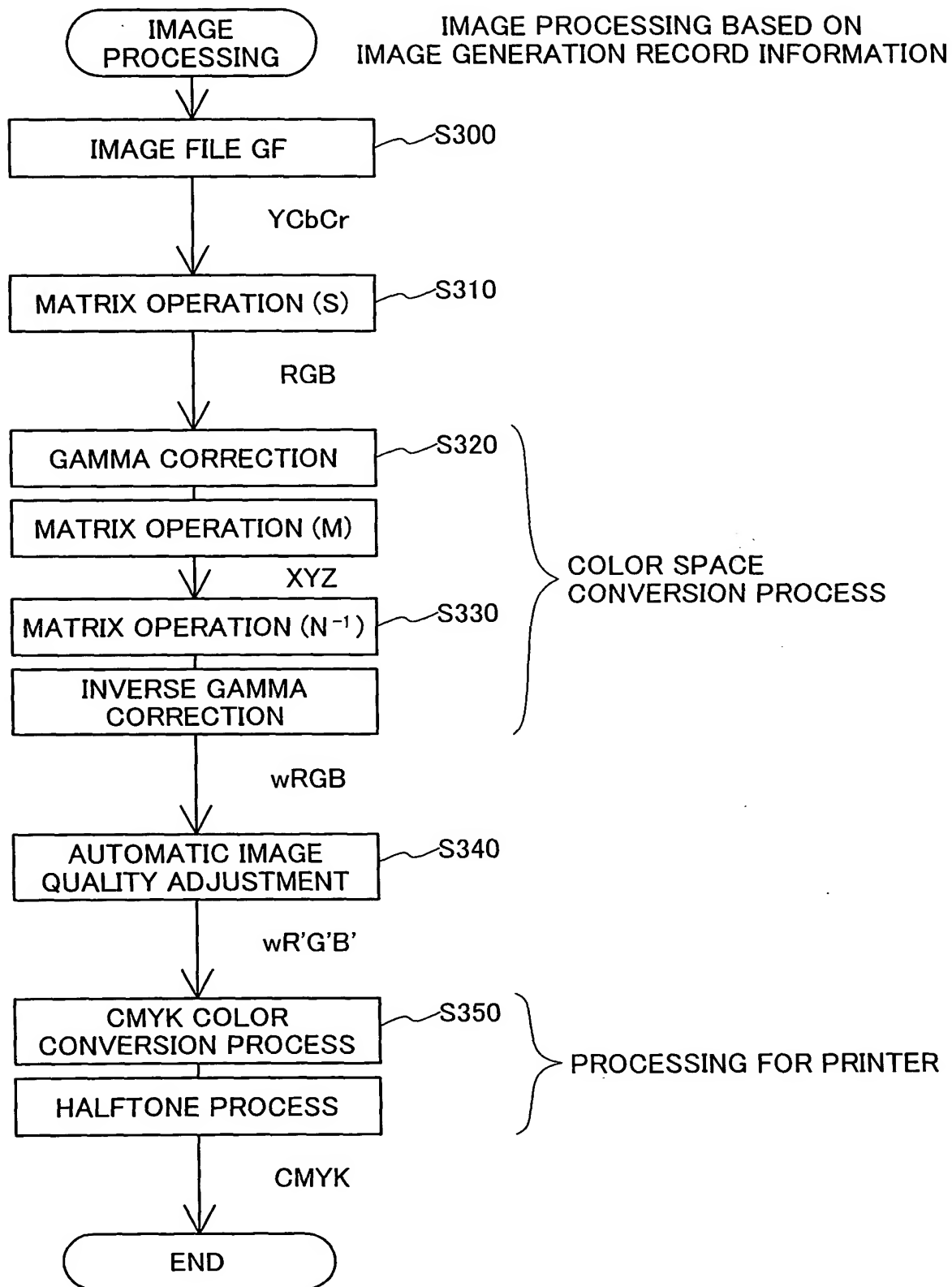


Fig.11

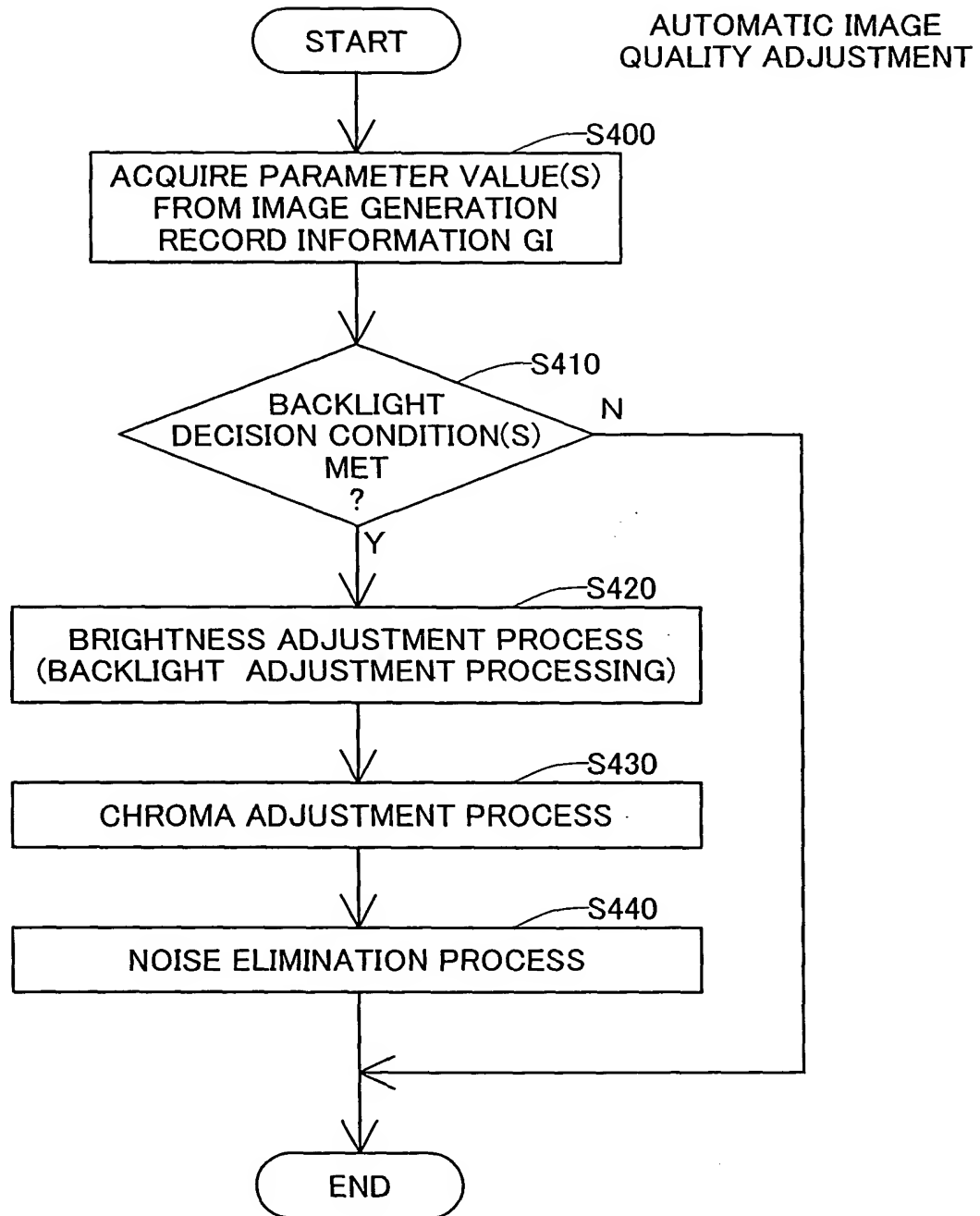


Fig.12(a)

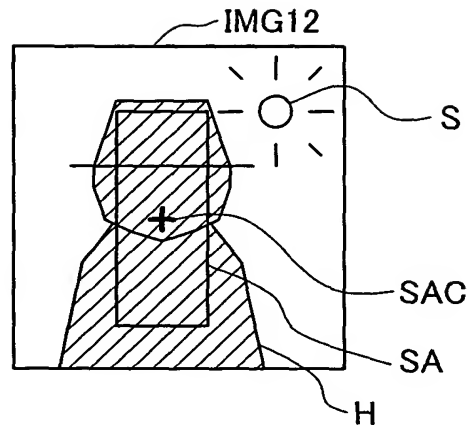


Fig.12(b)

BAave: average brightness value within subject area
 Bave: average brightness value of entire image
 k: predetermined constant

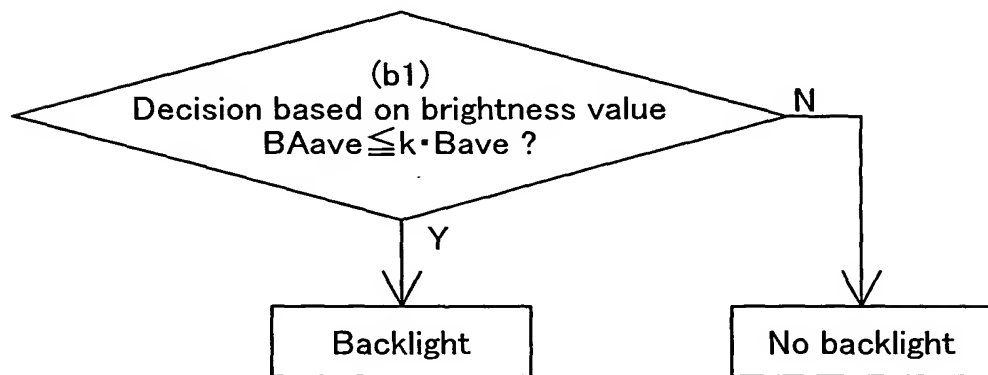


Fig.13(a)

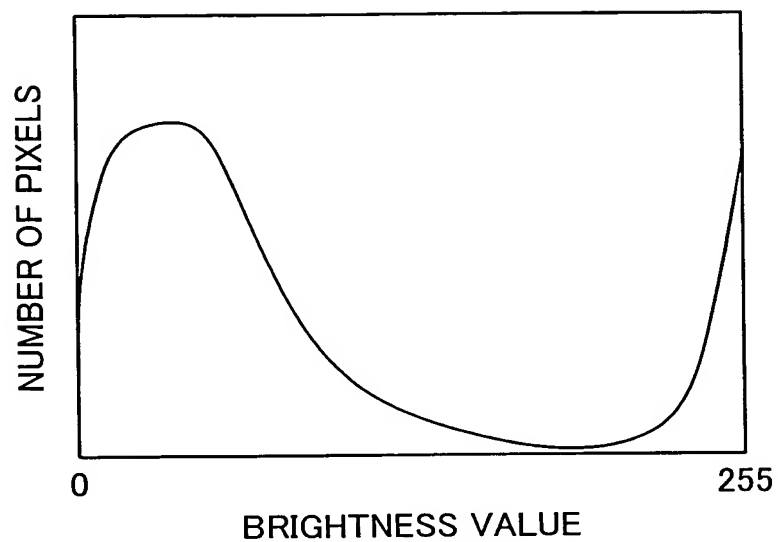


Fig.13(b)

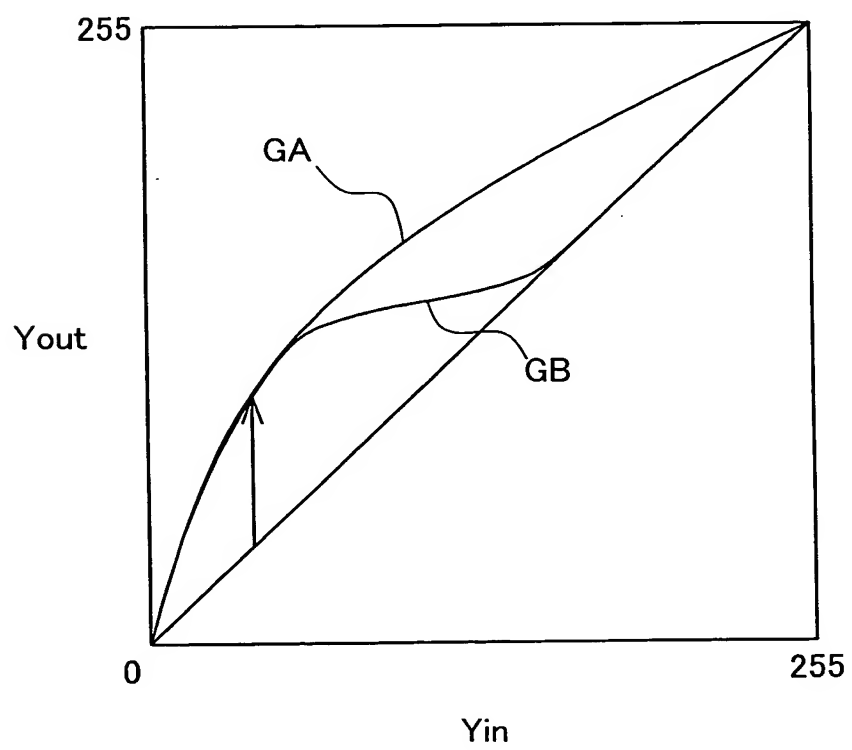


Fig.14(a)

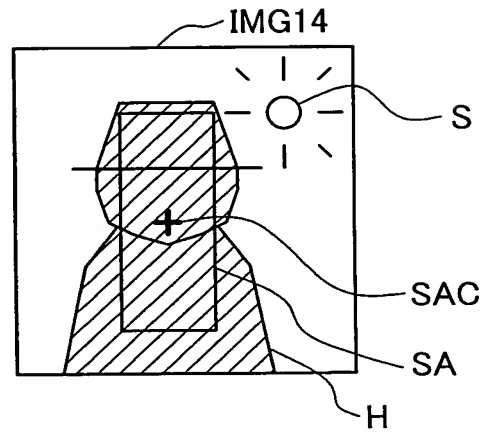


Fig.14(b)

BAave: average brightness value within subject area
 Bave: average brightness value of entire image
 k: predetermined constant

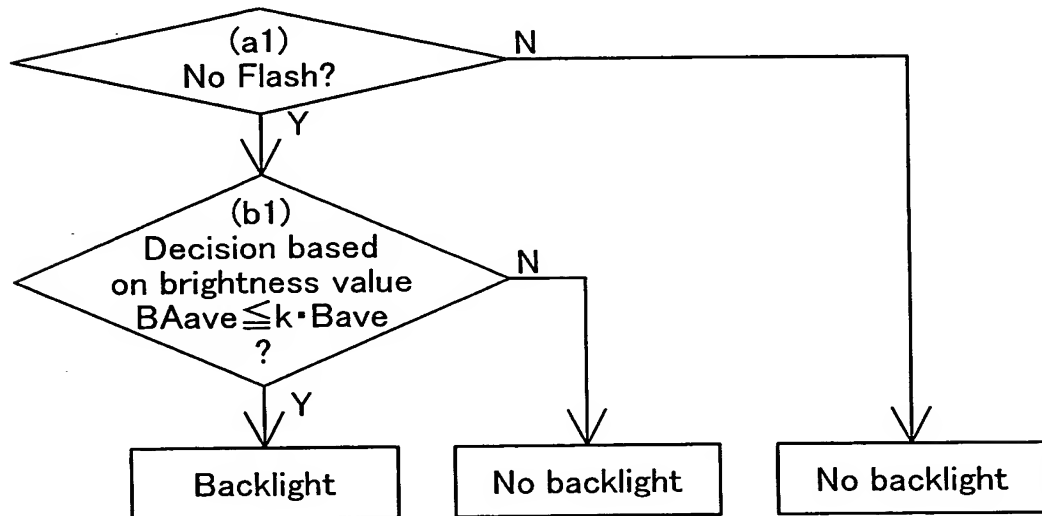


Fig.15(a)

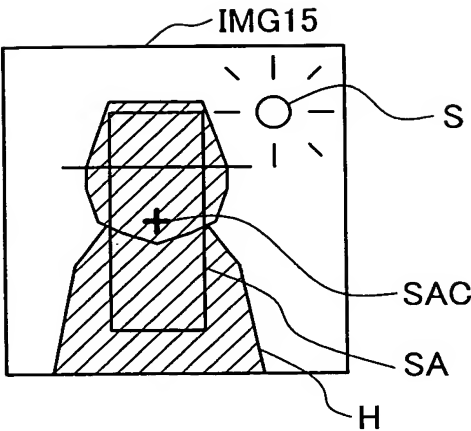


Fig.15(b)

BAave: average brightness value within subject area
Bave: average brightness value of entire image
k: predetermined constant

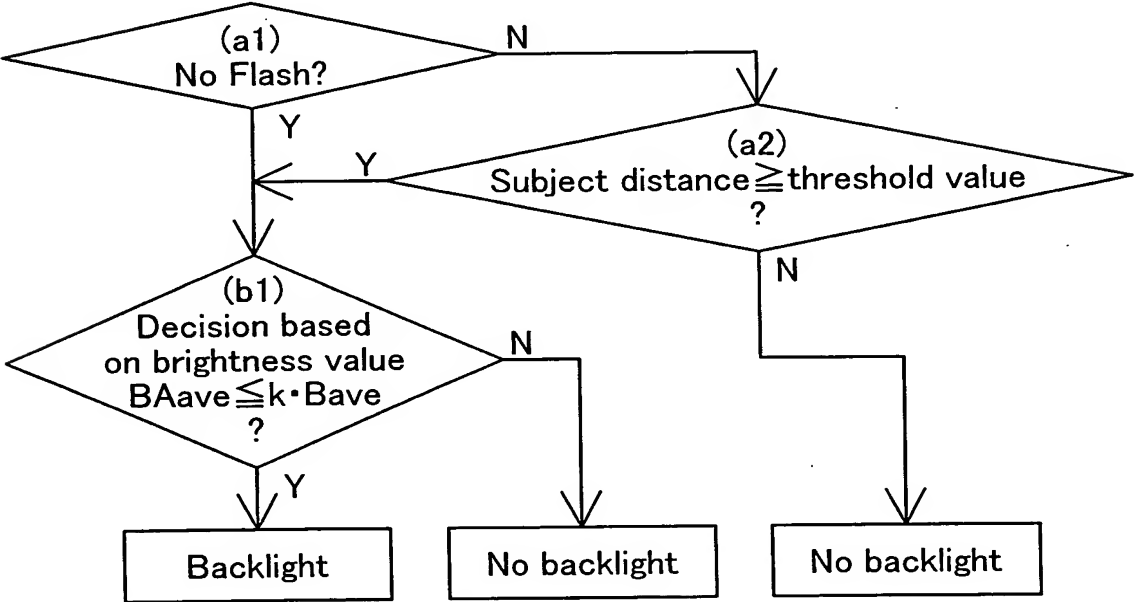


Fig.16(a)

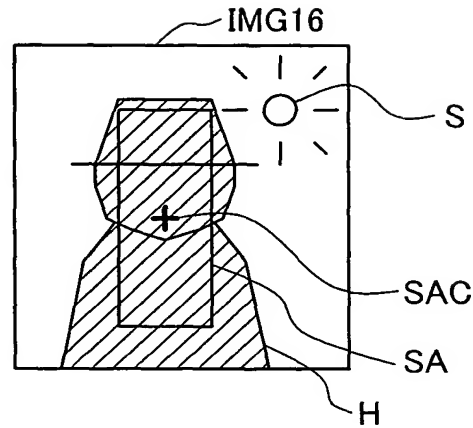


Fig.16(b)

BAave: average brightness value within subject area
 Bave: average brightness value of entire image
 k: predetermined constant

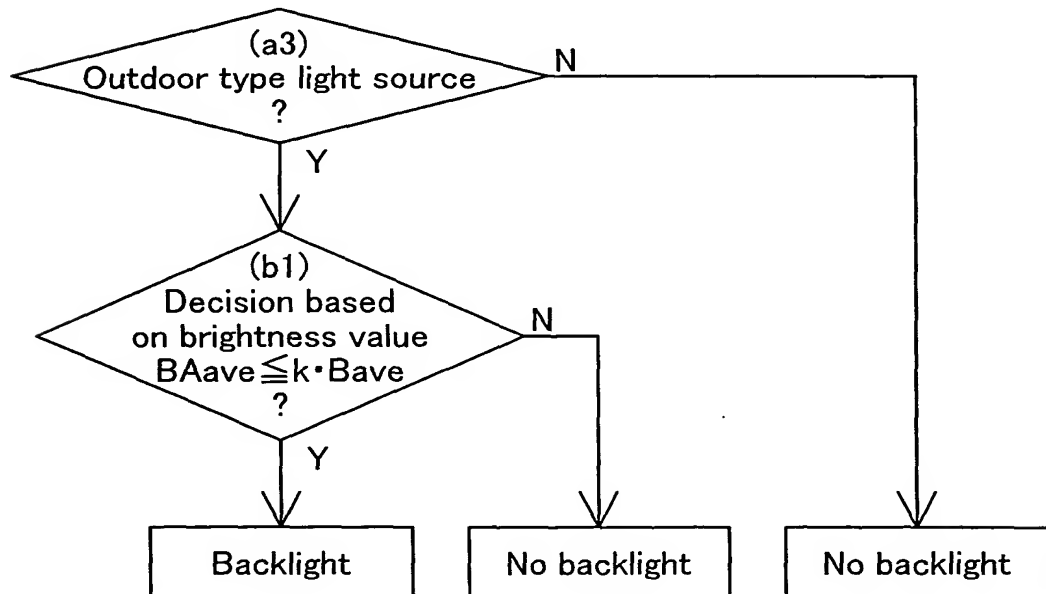


Fig.17(a)

Fig.17(c)

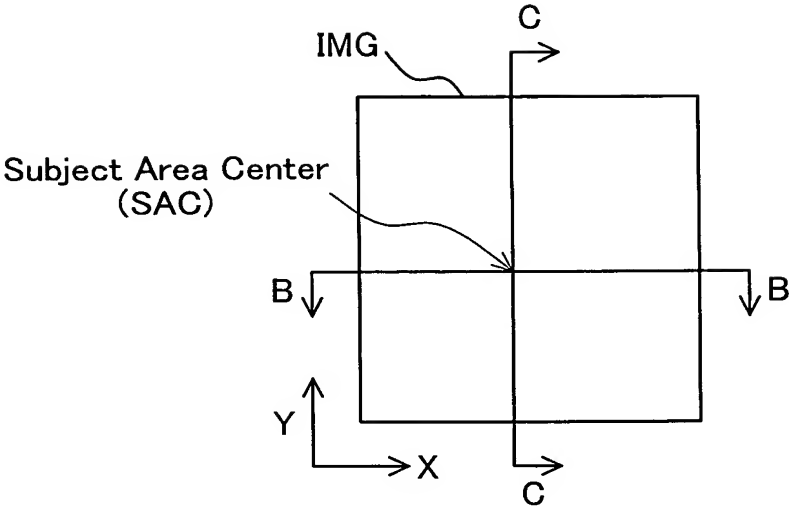


Fig.17(b)



Fig.18(a)

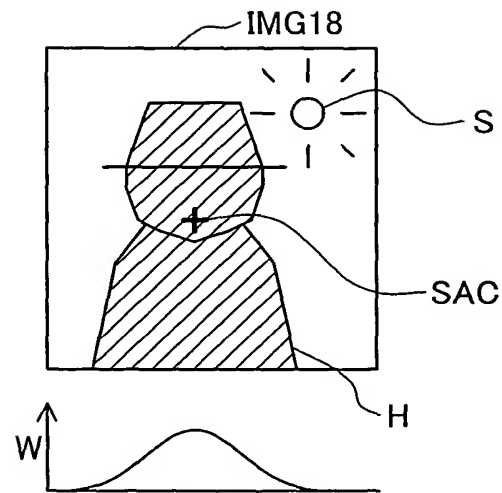


Fig.18(b)

BAWave: weighted average brightness value within subject area
 Bave: average brightness value of entire image
 k: predetermined constant

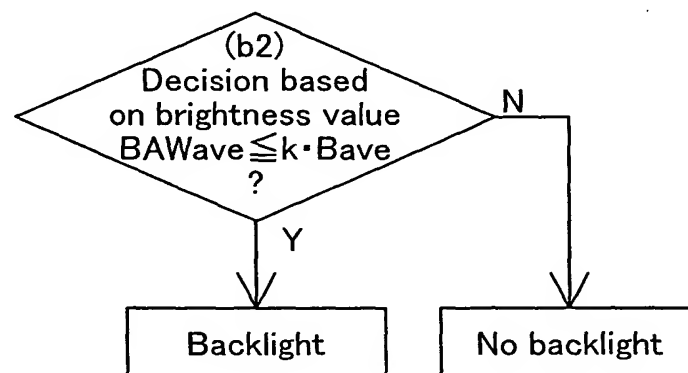


Fig.19(a)

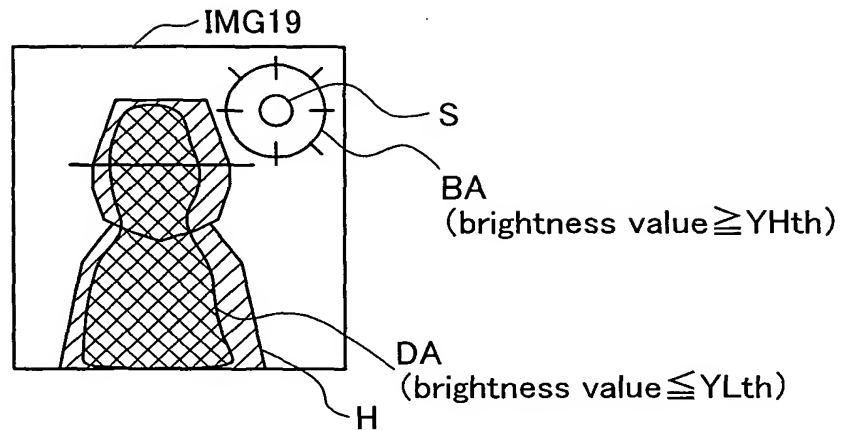


Fig.19(b)

Bratio: proportion of bright pixels (brightness value $\geq YHth$)
 Bth: bright pixel proportion threshold value
 Dratio: proportion of dark pixels (brightness value $\leq YLth$)
 Dth: dark pixel proportion threshold value

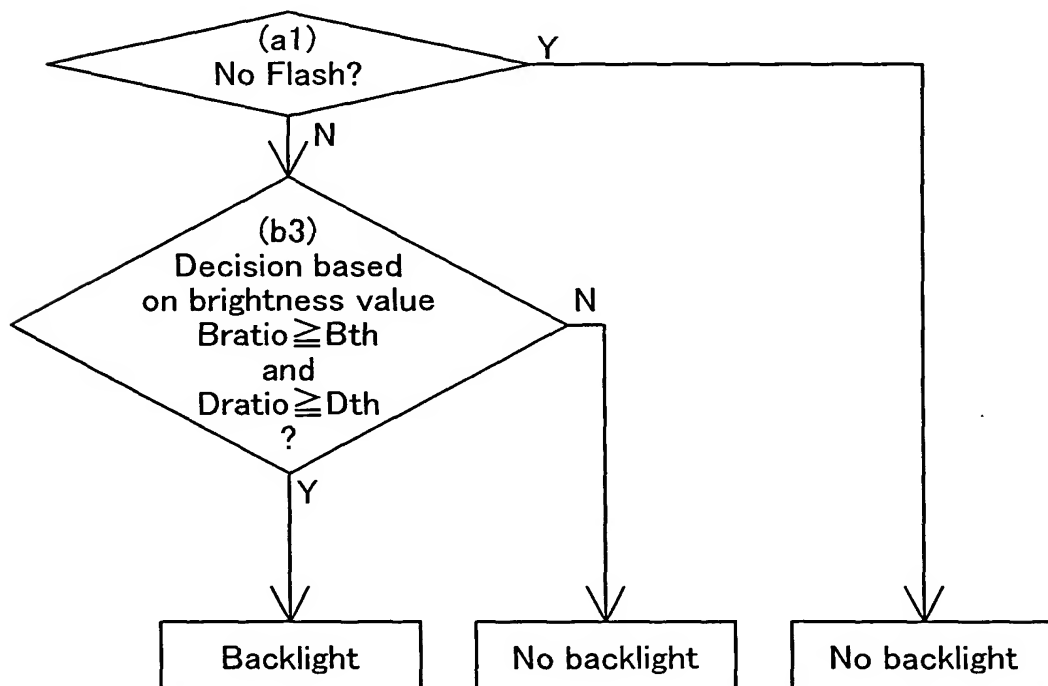


Fig.20(a)

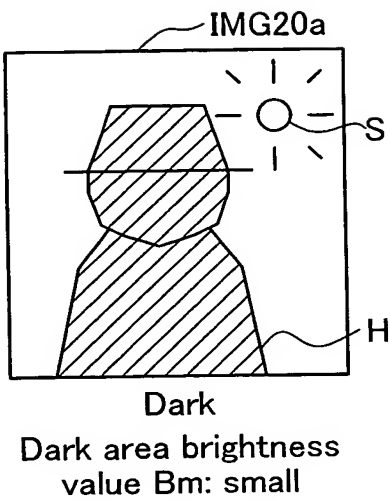


Fig.20(b)

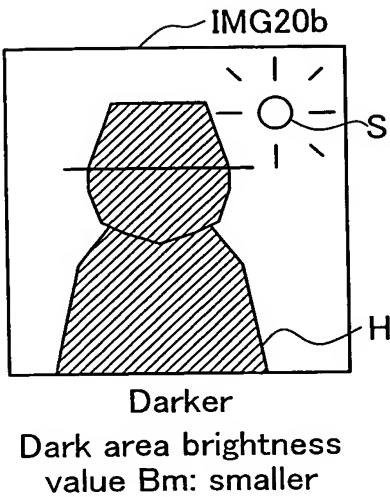


Fig.20(c)

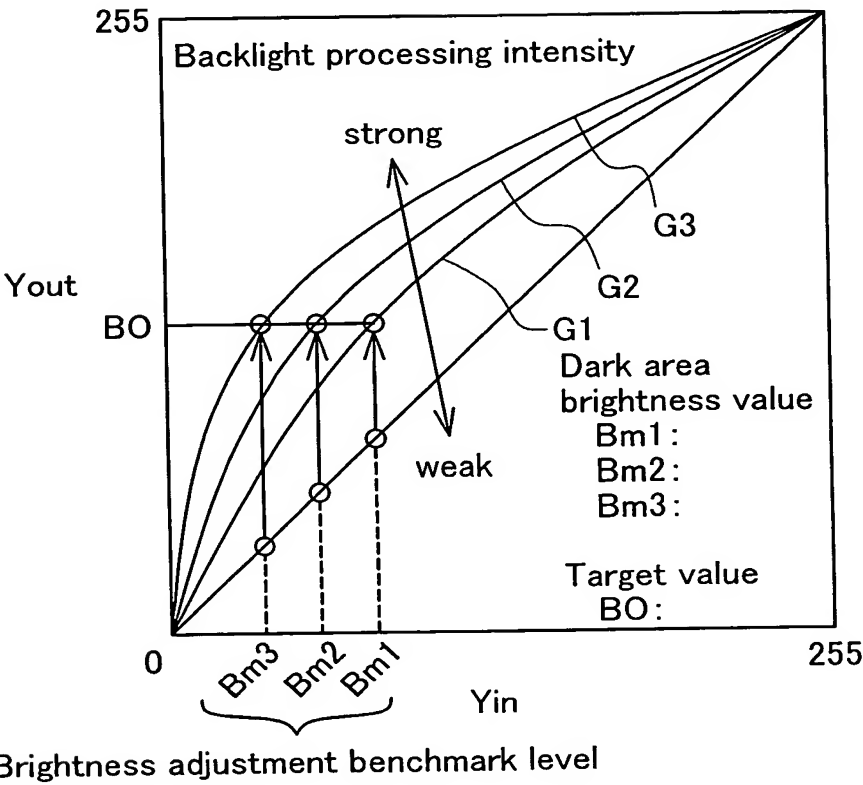
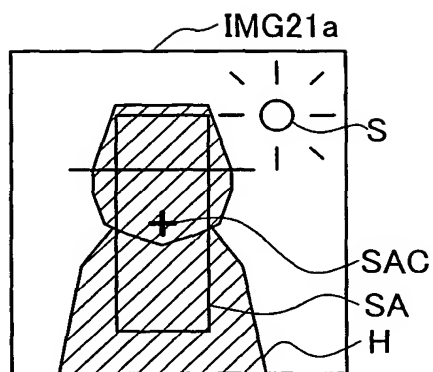


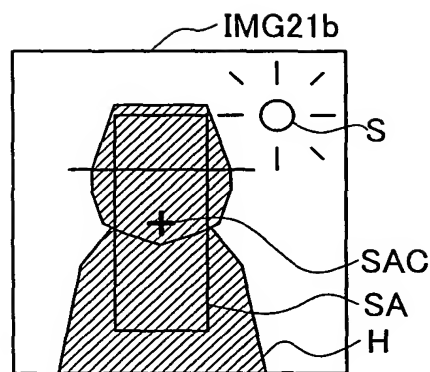
Fig.21(a)



Dark

Maximum brightness value
in subject area B_{Amax} : small

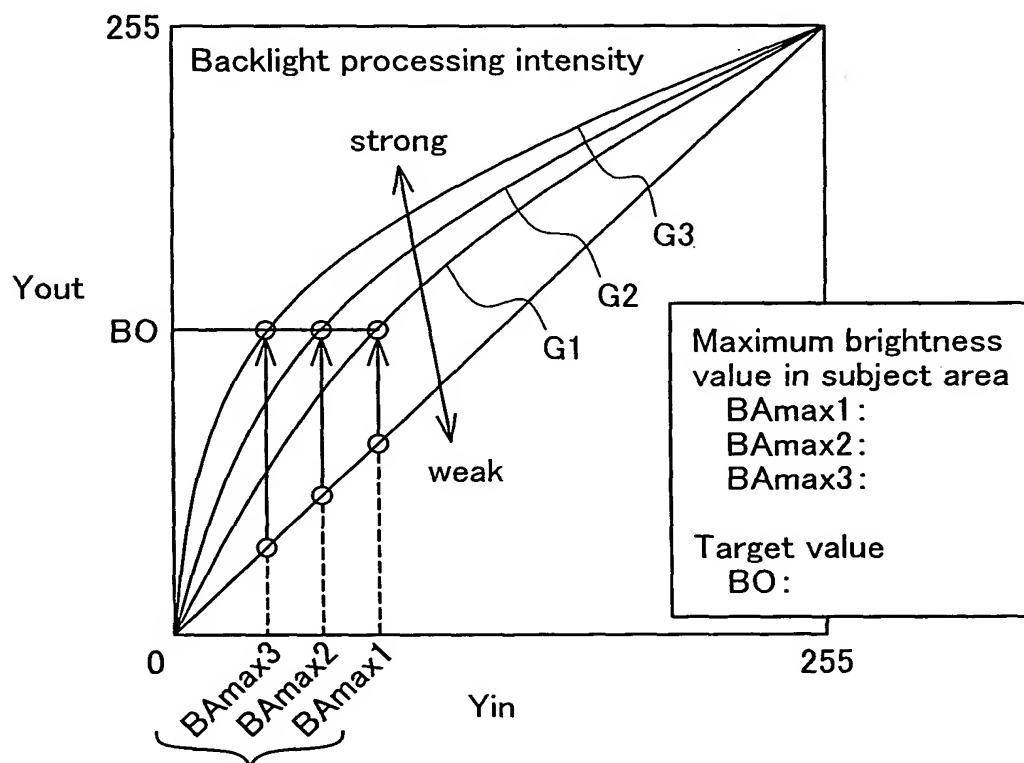
Fig.21(b)



Darker

Maximum brightness value
in subject area B_{Amax} : smaller

Fig.21(c)



Brightness adjustment benchmark level

Fig.22

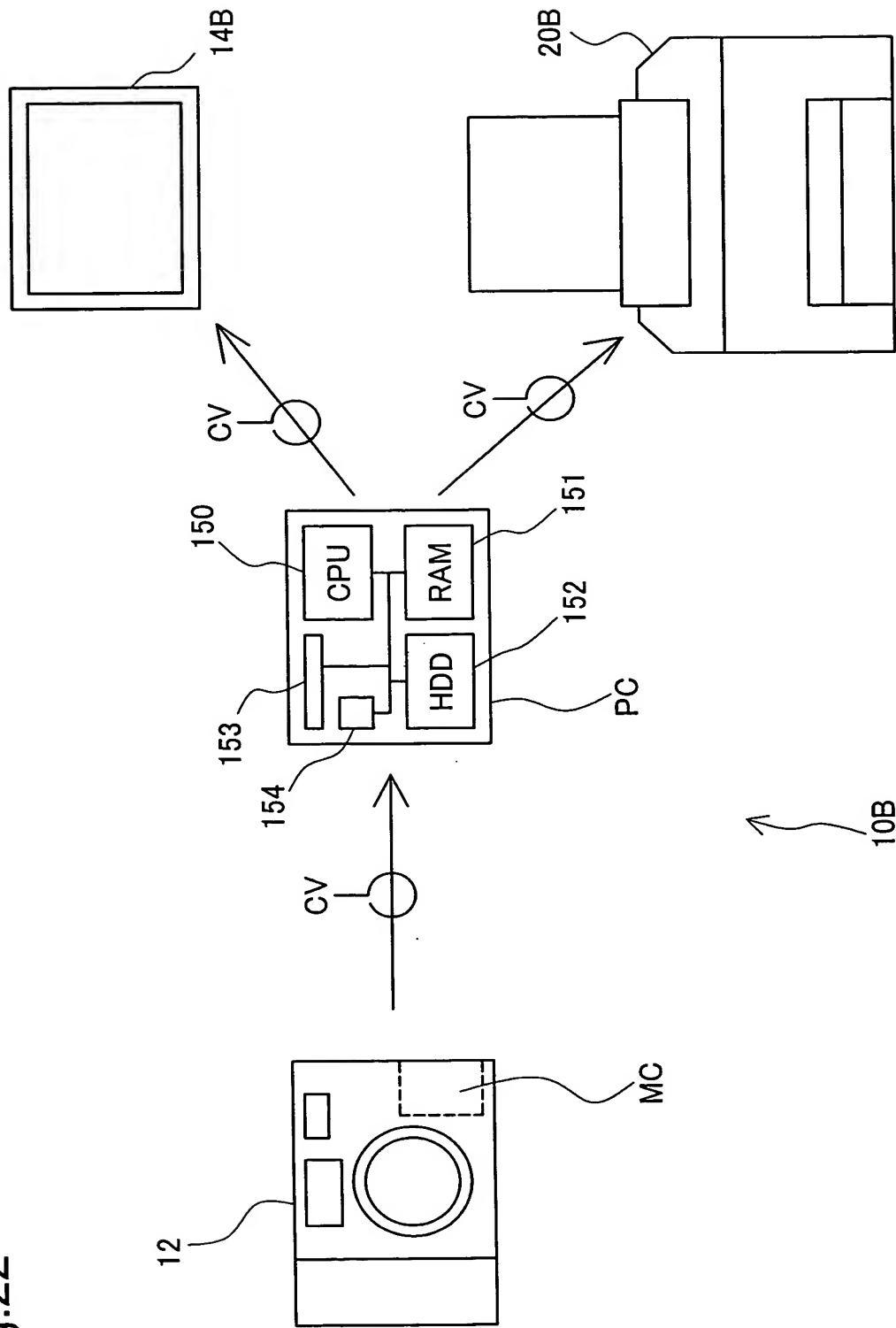


Fig.23

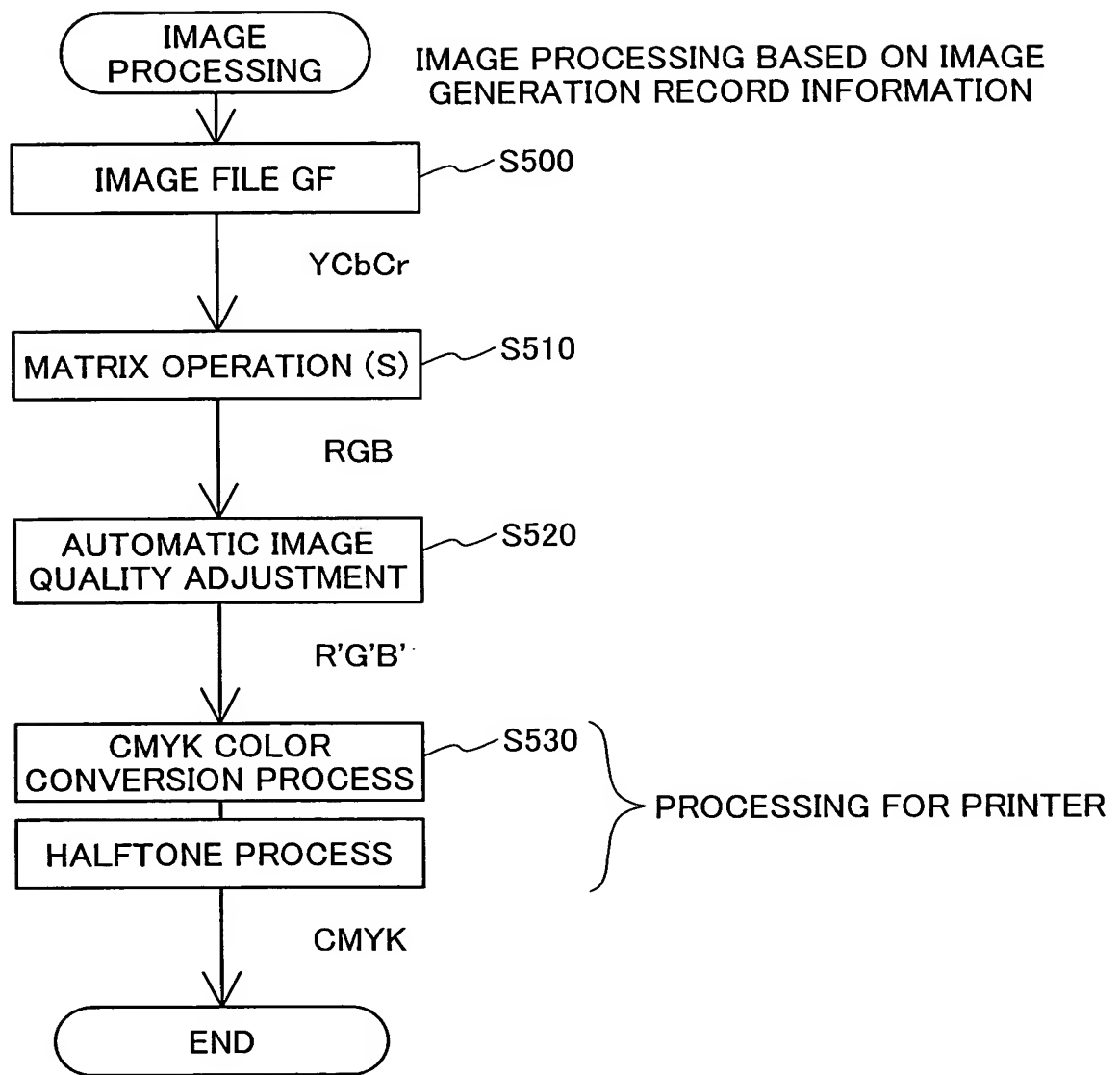


Fig.24

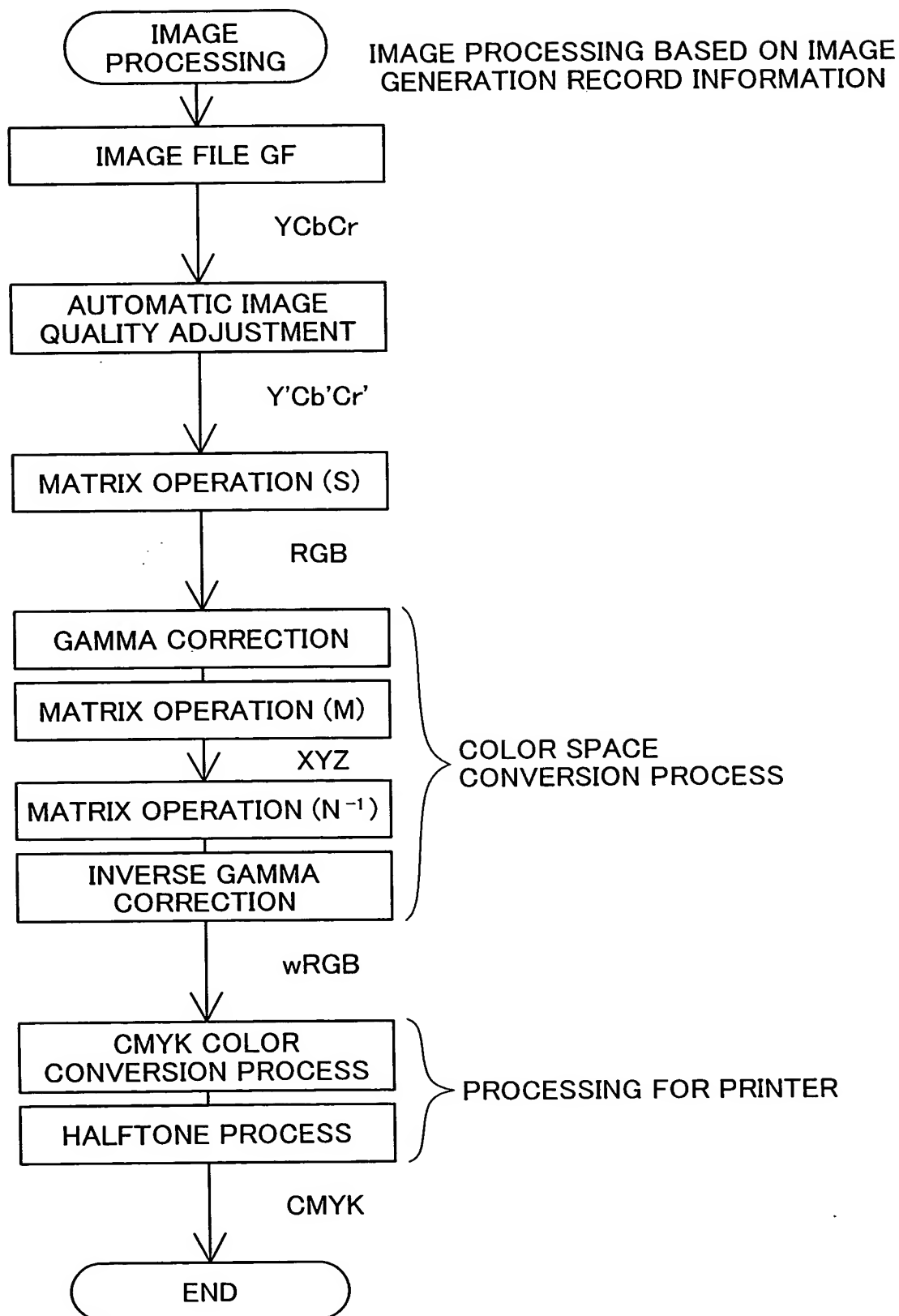


Fig.25

IMAGE PROCESSING BASED ON IMAGE
GENERATION RECORD INFORMATION